

MPS Failure Analysis

FA Group Introduction



- MPS FA Group includes 12 FA engineers, 5 FA technicians and two professional FA LAB in MPS-CD and MPS-HQ (San Jose).



Hamamatsu PHEMOS-1000



Hitachi S4800i SEM



Cascade probe station system

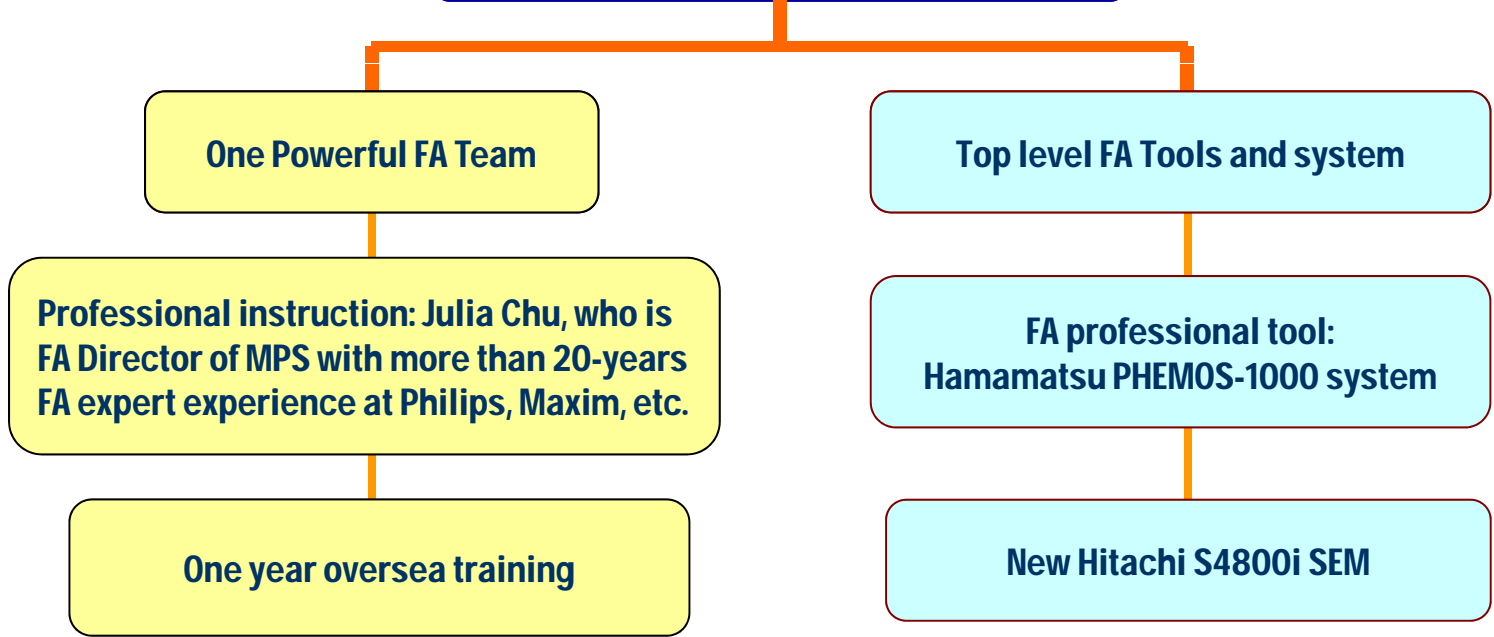
- Now, FA Group is continuously working to create an efficient and professional team for supporting the company's rapid growing.



MPS FA Merit



MPS FA Advantages





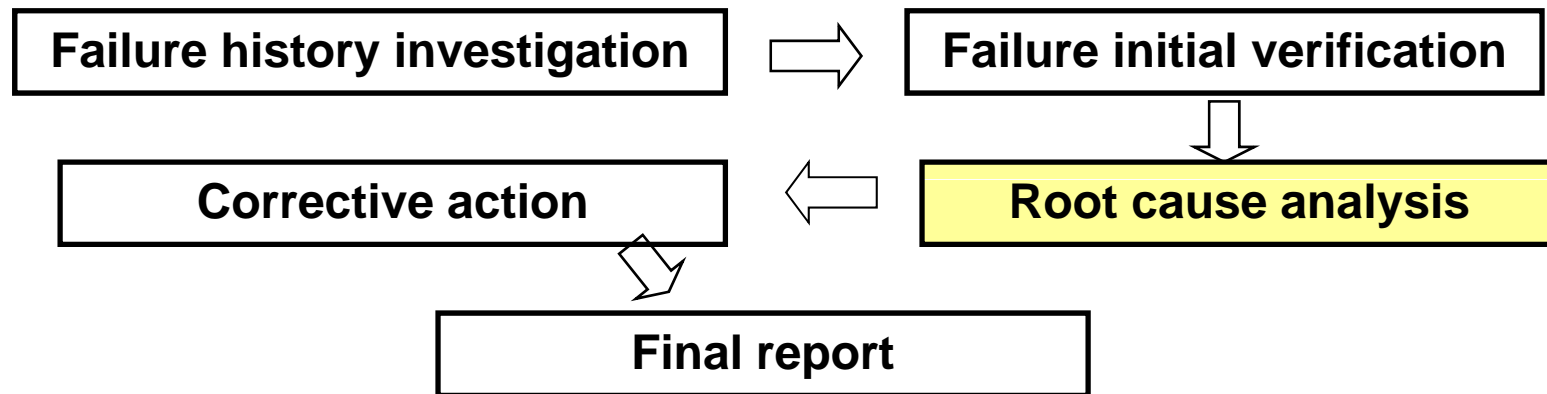
FA Engineering Responsibilities

- **The responsibility of MPS FA department is to support:**
 - 1) R&D (New Design/Process/Package development).
 - 2) Internal Products yield enhancement.
 - 3) Customer's failure analysis.

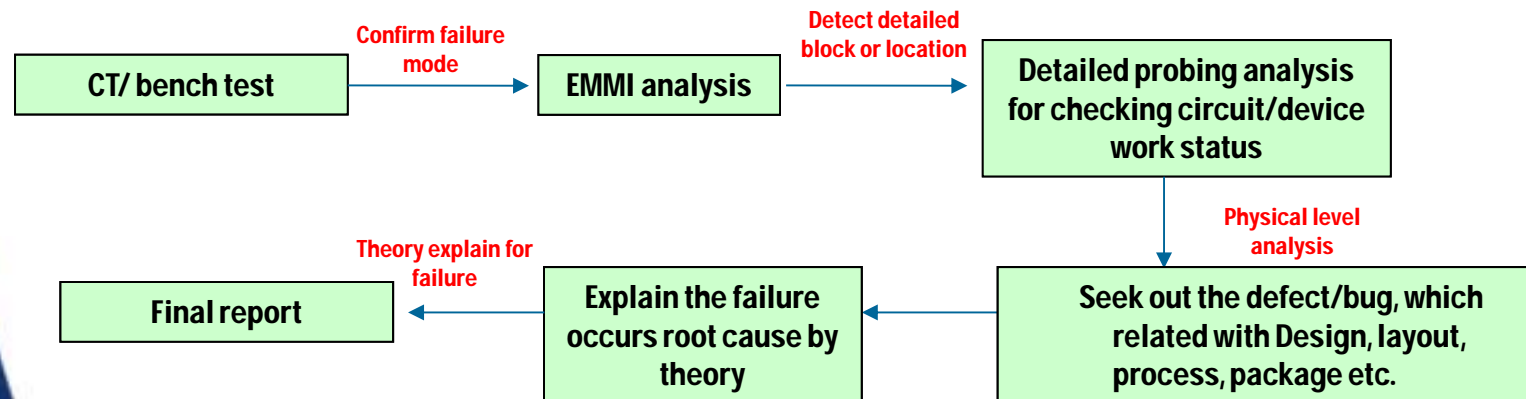
- **The Value of FA Job:**
 - 1) Save time and money.
 - 2) Improve company's long term performance and profits.
 - 3) Less failure, more satisfaction for customers.

Failure analysis Flow

- FA work flow



- Example





Failure analysis skills



- **Electrical analysis**---curve tracing, bench test, internal circuit micro-probing, EMMI and OBIRCH analysis.
- **Mechanical analysis**---cross section, parallel lapping
- **Chemical analysis**---Die removal, Decapsulation, Deprocess, aluminum etch, poly etch, Wright etch, junction stain, etc.
- Combination of the skills listed above.

FA Lab analysis Equipment

MPS FA Lab has lots of professional FA equipments and Electrical test equipments.



Chemical Experiment Hood

Summary of the Equipment in Our FA lab	
Items	Unit
Probe station	7
Decap machine	4
Laser Decap machine	1
Polisher	3
SEM	1
Hamamatsu 's Light Emission	2
Microscope	5



Electrical Test equipment



Decapsulation machine



Cascade Probe Station System



EcoMet 3000 Grinder/Polisher



Hitachi S4800i SEM



Hamamatsu PHEMOS-1000



FA Department Office/Lab



FA Group office



FA Group office



FA Group office

FA group



Laser Decap machine



Microscope station



Chemical Experiment station